



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,104	12/05/2001	Paul Welbes	DN1999253USA	5745

7590 09/29/2003

The Goodyear Tire & Rubber Company  
Patent & Trademark Department D 823  
1144 East Market Street  
Akron, OH 44316-0001

EXAMINER

MAKI, STEVEN D

ART UNIT PAPER NUMBER

1733

DATE MAILED: 09/29/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/018,104

Applicant(s)

WELBES ET AL.

Examiner

Steven D. Maki

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> . | 6) <input type="checkbox"/> Other:  |

Art Unit: 1733

1) This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the description of the hook shaped semi-blind grooves in the last four lines of claim 1 is ambiguous. In claim 1, the following changes are suggested: (1) on line 6 delete --a first row (1) of hook-shaped semi-blind grooves (40),--; (2) on lines 6-7 change "each hook-shaped semi-blind grooves (40) being inclined" to --each of the hook-shaped semi-blind grooves (40) of a first row being inclined--; (3) on line 9 after "offset" insert --from the hook-shaped semi-blind grooves of the first row--.

In claim 2 line 3, "groove" should be --grooves--.

In claim 2, there is no antecedent basis for "the other adjacent circumferentially continuous groove (20, 22)". Also, it is unclear if the description regarding intersecting is redundant to the originating subject matter of claim 1. In claim 2, it is suggested to delete --each hook-shaped semi-blind grooves(40) of the second row (2) intersecting the other adjacent circumferentially continuous groove (20, 22)--.

In claim 3, there is no antecedent basis for "the other adjacent circumferentially continuous groove (20, 22)". Also, it is unclear if the description regarding intersecting is redundant to the originating subject matter of claim 1. In claim 3, it is suggested to

Art Unit: 1733

delete --each hook-shaped semi-blind grooves(40) of the second row (2) intersecting the other adjacent circumferentially continuous groove (20, 22)--.

In claim 5, it is unclear if different ribs or the same rib is being compared. In claim 5, the following changes are suggested: (1) on line 4 change "rib (30)" to --one rib (30)-- and (2) on line 5 change "rib (32)" to --the other rib (32)--.

In claim 6, there is no antecedent basis for "the other rib" and the description regarding intersecting appears circular. In claim 6, it is suggested to change the first two lines to --The tread (12) of claim 5 wherein the hook-shaped semi-blind grooves (40) intersect a common--.

In claim 10, there is no antecedent basis for "the first lateral edge" and "the second lateral edges". In claim 10, it is suggested to change "the first lateral edge (14)" to --a first lateral edge (14) of the tread-- and (2) change "the second lateral edges (16)" to --the second lateral edge (16) of the tread--.

In claim 12 line 2, "about 90" should be --about 90 degrees-- to clarify the description of the change in orientation.

In claim 13 line 3, "50% of D or less 1" is confusing. In claim 13 line 3, it is suggested to change "50% of D or less 1" to --50% of full depth D or less--.

4) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1733

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Benson et al

6) **Claims 1, 3 and 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Benson et al (US 3012599).**

The claimed "hook-shaped semi-blind grooves" read on the hook shaped slots 10 of Benson. The description relating to "inclined obliquely as measured from a center line bisecting the hoof shaped semi blind grooves" fails to require an orientation of the hook shaped slots not shown by Benson in figure 1.

Verdier

7) **Claims 1-3 and 8-10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over by Verdier (US 3682220).**

Verdier discloses a tread comprising two circumferential grooves and three ribs. In figure 3, the ribbed tread includes blind crosswise grooves 36, 37 and 40. The crosswise grooves 36, 37 and 40 have a width of 3.5 to 4.5 mm. In figure 5, the ribbed tread includes crosswise grooves 57, 63. The crosswise grooves reduce longitudinal rigidity of the ribs to facilitate intimate contact with the ground and drain water to the circumferential grooves. The crosswise grooves are blind (terminate in the rib) to ensure circumferential continuity of the rib to favor quiet rolling and improve resistance

Art Unit: 1733

to wear and tear. The crosswise grooves may be arranged either perpendicularly or obliquely with respect to the median plane. See column 2 lines 29-53.

As to claim 1-3 and 8-10, the claimed "hook-shaped semi-blind grooves" read on (1) the crosswise grooves of figure 3 or (2) the crosswise grooves of figure 5. The description relating to "inclined obliquely as measured from a center line bisecting the hook shaped semi blind grooves" fails to require an orientation of the hook shaped slots not shown by Benson in figure 1.

In any event: As to claims 1, 8 and 9, it would have been obvious to one of ordinary skill in the art to orient the "hook shaped semi-blind" crosswise grooves of Verdier such that each "hook-shaped" crosswise groove is inclined obliquely as measured from a centerline bisecting the "hook-shaped semi-blind" crosswise groove (claim 1) at an angle such as 30-60 degrees (claim 8) or about 45 degrees (claim 9) since (1) Verdier teaches forming the crosswise grooves, which facilitate intimate contact with the ground and drain water to the circumferential grooves, as blind grooves having various end configurations (e.g. see figure 3, 5) to ensure circumferential continuity of the rib to favor quiet rolling and improve resistance to wear and tear and (2) Verdier expressly suggests arranging the crosswise grooves perpendicularly or obliquely. As to claims 2 and 3, see orientations indicated in figures 3 or 5. As to claim 3, it is especially noted that Verdier teaches inclining the blind crosswise grooves in one rib in the same direction.

**8) Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verdier (US 3682220) in view of Fukumoto et al (US 5833781).**

As to claim 4, it would have been obvious to extend a sipe from a blind portion of the blind groove and orient the sipe in the same direction as the blind portion of the blind transverse groove in view of (a) Verdier's teaching to extend a sipe (e.g. sipe 13) from the blind portion of the crosswise groove to enhance mobility of the center and lateral ridges and (b) Fukumoto et al shows extending a sipe from a blind groove (see notch 11) such that the sipe extends in the same direction as the blind groove.

Mirtain et al

9) **Claims 1-3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mirtain et al (US 4387754) in view of Verider (US 3682220).**

Mirtain et al discloses a tire having a ribbed tread comprising ribs separated by circumferential grooves. Blind transverse notches (blind transverse grooves are formed in each rib. Mirtain does not recite shaping the blind transverse grooves as "hook-shaped" semi-blind grooves.

As to claims 1-10, it would have been obvious to one of ordinary skill in the art to shape the blind transverse grooves of Mirtain et al as obliquely inclined hook shaped semi-blind grooves since (1) Verdier (which like Mirtain et al desires continuous ribs) teaches forming the crosswise grooves, which facilitate intimate contact with the ground and drain water to the circumferential grooves, as blind grooves having various end configurations (e.g. see figure 3, 5) to ensure circumferential continuity of the rib to favor quiet rolling and improve resistance to wear and tear and (2) Verider expressly suggests arranging the crosswise grooves perpendicularly or obliquely. As to claims 2 and 3, note the inclination direction suggested by Mirtain and the hook-shape orientation

Art Unit: 1733

suggested by Verider. As to claim 2, it is especially noted that Mirtain teaches oppositely inclining the blind transverse grooves. As to claims 5-7, Mirtain suggests plural ribs wherein the blind transverse grooves at the center circumferential grooves are aligned. As to claims 8 and 9, note the inclination of the blind transverse grooves suggested by Mirtain and Verdier. As to claim 10, Mirtain suggests shoulder ribs.

10) **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mirtain et al (US 4387754) in view of Verdier (US 3682220) as applied above and further in view of Fukumoto et al (US 5833781).**

As to claim 4, it would have been obvious to extend a sipe from a blind portion of the blind groove and orient the sipe in the same direction as the blind portion of the blind transverse groove in view of (a) Verdier's teaching to extend a sipe (e.g. sipe 13) from the blind portion of the crosswise groove to enhance mobility of the center and lateral ridges and (b) Fukumoto et al shows extending a sipe from a blind groove (see notch 11) such that the sipe extends in the same direction as the blind groove.

Europe '448

11) **Claims 1, 3 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '448 (EP 231448) in view of Verdier (US 3682220).**

Europe '448 discloses a tire having a tread comprising four circumferential grooves, two rows of **shoulder blocks** and three **ribs**. Each rib comprises "blind transverse grooves" 13, 14. Europe '448 shows one of the transverse grooves as being hook shaped but does not show the other transverse grooves as being hook shaped.



As to claims 1, 3 and 8-10, it would have been obvious to one of ordinary skill in the art to shape the blind transverse grooves as obliquely inclined hook shaped semi-blind grooves since (1) Verdier teaches forming the crosswise grooves, which facilitate intimate contact with the ground and drain water to the circumferential grooves, as blind grooves having various end configurations (e.g. see figure 3, 5) to ensure circumferential continuity of the rib to favor quiet rolling and improve resistance to wear and tear and (2) Verider expressly suggests arranging the crosswise grooves perpendicularly or obliquely.

**12) Claim 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '448 (EP 231448) in view of Verdier (US 3682220) as applied above and further in view of Minami (US 5526860).**

As to claim 11, it would have been obvious to use curved shoulder grooves as claimed in the tread of Europe '448 which has shoulder grooves and blind grooves in view of Minami's suggestion to define shoulder blocks using curved shoulder grooves which are aligned with blind transverse grooves.

**13) Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe '448 (EP 231448) in view of Verdier (US 3682220) and Minami (US 5526860) as applied above and further in view of Hitzky (EP 640498).**

As to claims 12 and 13, the limitations therein would have been obvious in view of Hitzky's teaching to locate tie bars in shoulder grooves which change orientation blocks to cause the shoulder blocks to behave like a rib and thereby reduce noise.

Art Unit: 1733

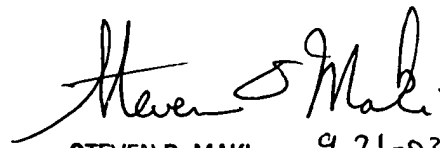
Remarks

- 14) The remaining references are cited of interest.
- 15) No claim is allowed.
- 16) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki  
September 21, 2003

  
STEVEN D. MAKI  
PRIMARY EXAMINER  
~~GROUP 1300~~  
AV 1733  
9-21-03